

# United States Patent [19]

Shimizu et al.

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[54] POLYSACCHARIDES N9GI, THEIR  
PREPARATION AND THERAPEUTIC  
COMPOSITIONS CONTAINING THEM

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536/123; 536/127; 536/128

[58] Field of Search ..... 424/180; 536/114, 123,  
536/127, 128; 514/54

## [56] References Cited

### U.S. PATENT DOCUMENTS

2,871,235	1/1959	Jilovice	536/128
4,229,440	10/1980	Murofushi et al.	536/123
4,304,906	12/1981	Kang et al.	536/123
4,366,308	12/1982	Soma et al.	536/128

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## [57] ABSTRACT

A hot-water extract of the bark of *Melia azadirachta* L. is treated with a gel filtrating agent with a fractionation range molecular weight from  $1 \times 10^3$ — $1 \times 10^5$  to  $1 \times 10^3$ — $1.5 \times 10^5$ . There is obtained polysaccharide N9GI from the first fraction of the three divided polysaccharide fractions. Polysaccharide N9GI further treated with a gel-filtrating agent with a fractionation range molecular weight from  $1 \times 10^3$ — $2 \times 10^5$  to  $1 \times 10^3$ — $8 \times 10^5$ . There are obtained polysaccharide N9GIa and polysaccharide N9GIb respectively from the first and second fractions of the two divided polysaccharide fractions.

20 Claims, 5 Drawing Figures